AMENDMENTS TO THE CLAIMS

Please amend the claims as indicated in the below listing of claims that will replace all prior versions and listings of claims in the application. An identifier indicating the status of each claim is provided.

LISTING OF CLAIMS:

1. (Currently Amended) An information processing apparatus for scheduling order of data reading from a recording medium, comprising:

first sorting means for sorting data items recorded on the recording medium based on playback times of the data items, the first sorting means comprising (i) first detecting means for detecting, from data items which have not been moved yet to a first queue among the data items recorded on the recording medium, a data item having earliest playback time, and (ii) first moving means for moving and storing the data item detected by the first detecting means in the first queue; and

second sorting means for sorting the data items sorted by the first sorting means based on recording positions of the data items on the recording medium, and using the sorting result as a result of scheduling the order of data reading from the recording medium, the second sorting means comprising (i) setting means for setting a schedule window corresponding to a range of the data items stored in the first queue, the range of the data items being subject to sorting based on the recording positions of the data items on the recording medium, (ii) second detecting means for detecting, based on the recording positions of the data items on the recording medium, from the range of the data items in the schedule window, a data item to be moved to a second queue, (iii) second moving means for moving the data item detected by the second detecting means to the second queue (iv) first determination means for determining whether or not the second queue is empty, and (v) second determination means for determining whether or not the range of the data items in the schedule window includes a data item recorded behind the

recording position on the recording medium of the end data item of the second queue; and wherein:

when the second queue is empty, the second detecting means detects, from the range of the data items in the schedule window, a data item which has an initial recording position on the recording medium;

when the second queue is not empty, and the range of the data items in the schedule window does not include a data item recorded behind the recording position on the recording medium of the end data item of the second queue, the second detecting means detects, from the range of the data items in the schedule window, a data item which has an initial recording position on the recording medium; and

when the second queue is not empty, and the range of the data items in the schedule window includes a data item which is recorded behind the recording position on the recording medium of the end data item of the second queue, the second detecting means detects, from the range of the data items in the schedule window, a data item which is recorded behind the recording position on the recording medium of the end data item of the second queue and which is closest to the recording position on the recording medium of the end data item of the second queue.

2. (Original) An information processing apparatus according to claim 1, wherein at least one of video data and audio data is recorded in predetermined units on the recording medium.

3. (Original) An information processing apparatus according to claim 2, wherein the video data and the audio data in the predetermined units are alternately recorded on the recording medium.

Claims 4-7 (Canceled).

8. (Currently Amended) An information processing apparatus according to claim [[5]] 1, wherein:

the second sorting means further comprises third determination means for determining whether or not the data item moved to the second queue has been positioned at the start of the schedule window; and

when the data item moved to the second queue has been positioned at the start of the schedule window, the setting means resets the schedule window.

9. (Currently Amended) An information processing method for scheduling order of data reading from a recording medium, comprising:

a first sorting step for sorting data items recorded on the recording medium based on playback times of the data items, the first sorting step comprising a first detecting step for detecting, from data items which have not been moved to a first queue among the data items recorded on the recording medium, a data item having earliest playback time, and (ii) a first moving step for moving and storing the data item detected in the first detecting step in the first queue; and

a second sorting step for sorting, based on recording positions of the data items on the recording medium, the data items sorted based on the playback times thereof in the first sorting step, and using the sorting result as a result of scheduling the order of data reading from the recording medium, the second sorting step comprising (i) a setting step for setting a schedule window corresponding to a range of the data items stored in the first queue, the range of the data items being subject to sorting based on the recording positions of the data items on the recording medium, (ii) a second detecting step for detecting, based on the recording positions of the data items on the recording medium, from the range of the data items in the schedule window, a data item to be moved to a second queue, (iii) a second moving step for moving the data item detected in the second detecting step to the second queue, (iv) a first determination step for determining

whether or not the second queue is empty, and (v) a second determination step for determining whether or not the range of the data items in the schedule window includes a data item recorded behind the recording position on the recording medium of the end data item of the second queue; and wherein:

when the second queue is empty, from the range of the data items in the schedule window, a data item which has an initial recording position on the recording medium is detected in the second detecting step;

when the second queue is not empty, and the range of the data items in the schedule window does not include a data item recorded behind the recording position on the recording medium of the end data item of the second queue, from the range of the data items in the schedule window, a data item which has an initial recording position is detected in the second detecting step; and

when the second queue is not empty, and the range of the data items in the schedule window includes a data item recorded behind the recording position on the recording medium of the end data item of the second queue, in the second detecting step, from the range of the data items in the schedule window, a data item is detected which is recorded behind the recording position on the recording medium of the end data item of the second queue and which is closest to the recording position on the recording medium of the end data item of the second queue.

10. (Original) An information processing method according to claim 9, wherein at least one of video data and audio data is recorded in predetermined units on the recording medium.

11. (Original) An information processing method according to claim 10, wherein the video data and the audio data in the predetermined units are alternately recorded on the recording medium.

Claims 12-15 (Canceled).

16. (Currently Amended) An information processing method according to claim [[13]] 9, wherein:

the sorting step further comprises a third determination step for determining whether or not the data item moved to the second queue has been positioned at the start of the schedule window; and

when the data item moved to the second queue has been positioned at the start of the schedule window, in the setting step, the schedule window is reset.

17. (Currently Amended) A program for causing a computer to perform an information processing method for scheduling order of data reading from a recording medium, the information processing method comprising:

a first sorting step for sorting data items recorded on the recording medium based on playback times of the data items, the first sorting step comprising (i) a first detecting step for detecting, from data items which have not been moved to a first queue among the data items recorded on the recording medium, a data item having earliest playback time, and (ii) a first moving step for moving and storing the data item detected in the first detecting step in the first queue; and

a second sorting step for sorting, based on recording positions of the data items on the recording medium, the data items sorted based on the playback times thereof in the first sorting step, and using the sorting result as a result of scheduling the order of data reading from the recording medium, the second sorting step comprising (i) a setting step for setting a schedule window corresponding to a range of the data items stored in the first queue, the range of the data items being subject to sorting based on the recording positions of the data items on the recording medium, (ii) a second detecting step for detecting, based on the recording positions of the data items on the recording medium, from the range of the data items in the schedule window, a data

item to be moved to a second queue, (iii) a second moving step for moving the data item detected in the second detecting step to the second queue, (iv) a first determination step for determining whether or not the second queue is empty, and (v) a second determination step for determining whether or not the range of the data items in the schedule window includes a data item recorded behind the recording position on the recording medium of the end data item of the second queue; and wherein:

when the second queue is empty, from the range of the data items in the schedule window, a data item which has an initial recording position on the recording medium is detected in the second detecting step;

when the second queue is not empty, and the range of the data items in the schedule window does not include a data item which is recorded behind the recording position on the recording medium of the end data item of the second queue, from the range of the data items in the schedule window, a data item which has an initial recording position is detected in the second detecting step; and

when the second queue is not empty, and the range of the data items in the schedule window includes a data item recorded behind the recording position on the recording medium of the end data item of the second queue, in the second detecting step, from the range of the data items in the schedule window, a data item is detected which is recorded behind the recording position on the recording medium of the end data item of the second queue and which is closest to the recording position on the recording medium of the end data item of the second queue.

18. (Original) A program according to claim 17, wherein at least one of video data and audio data is recorded in predetermined units on the recording medium.

19. (Original) A program according to claim 18, wherein the video data and the audio data in the predetermined units are alternately recorded on the recording medium.

Claims 20-23 (Canceled).

24. (Currently Amended) A program according to claim [[21]] 17, wherein:

the sorting step further comprises a third determination step for determining whether or not the data item moved to the second queue has been positioned at the start of the schedule window; and

when the data item moved to the second queue has been positioned at the start of the schedule window, in the setting step, the schedule window is reset.